



Hurricane Harvey

Event Report (Update #3)

REPORT TIME & DATE:	8:30 AM EDT Sunday, August 27, 2017
INCIDENT START DATE:	Friday, August 25, 2017
PRIMARY LOCATION(S):	Gulf Coast (Texas and Louisiana)
REPORT DISTRIBUTION:	Public

EXECUTIVE SUMMARY

Harvey was downgraded to a tropical storm on Saturday afternoon and is expected to be downgraded to a tropical depression by Sunday evening. Nevertheless, Harvey is still producing heavy rain across the impacted areas leading the significant flooding. Harvey made landfall around 11:00 PM EDT on Friday, August 25 between Port Aransas and Port O’Connor, Texas as a category 4 hurricane. Harvey was the strongest hurricane to impact Texas since 1961 and the first category 4 storm to make landfall in the United States since Hurricane Charley impacted Florida in 2004.

As of 7:30 AM EDT Sunday, there were approximately 290,000 customer power outages across Texas and no significant power outages in Louisiana. Impacted utilities have issued statements that they are expecting power outages to last several days. Restoration efforts cannot begin until weather conditions are safe. High rainfall total and flooding could extend restoration times in many affected areas. Before equipment in flooded areas can be reenergized, waters will need to recede and equipment at substations will need to dry out and be inspected for damage. Additionally, before customers can have electricity restored to homes or businesses impacted by flooding, customers need to have equipment inspected.

As of Saturday 24.5% of the oil production 25.9% of the natural gas production in Gulf of Mexico were shut-in as a precaution and most refineries in the area were shutdown. Retail gas station outages have been reported in the impacted region; however, overall stocks of gasoline and distillate in the region are at or above the top-end of the 5-year range.

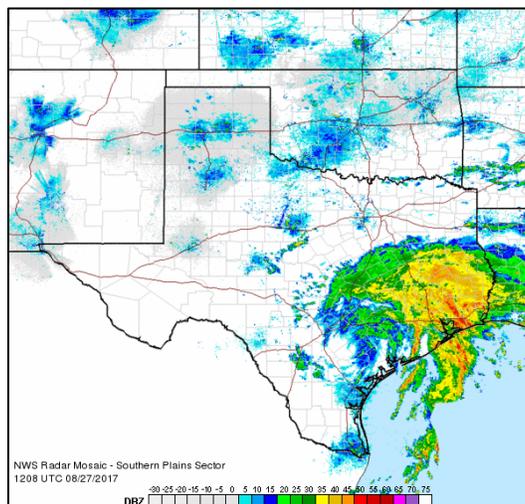
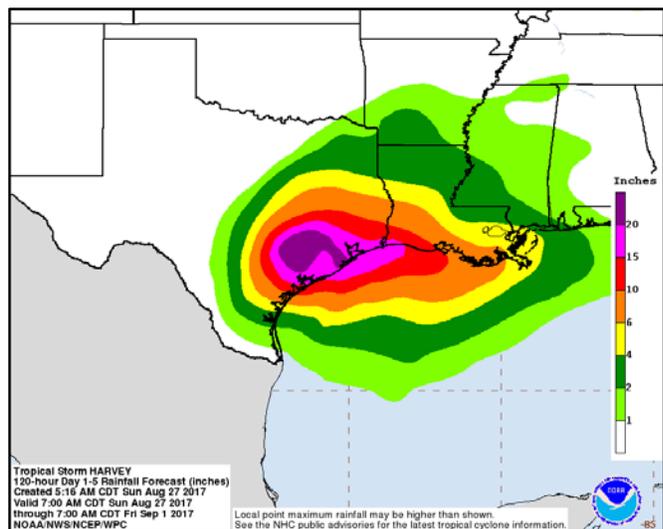
A federal major disaster declaration was approved for Texas on August 25. The U.S. Environmental Protection Agency, in consultation with DOE approved a request made by Texas to waive requirements for reformulated gasoline, Reid vapor pressure, and Texas Low Emission Diesel for select counties in Texas to help alleviate constraints on gasoline for retail stations due to the storm. The Federal Motor Carrier Safety Administration also issued a Regional Emergency Declaration in the States of Texas and Louisiana for an exemption from certain regulations, including hours-of-service, to ensure immediate transportation of supplies, equipment, and persons.

INCIDENT OVERVIEW

As of 8:00 AM EDT, Harvey was 45 miles west-northwest of Victoria, Texas moving south-southeast at 1 MPH, with maximum sustained winds of 45 MPH (tropical storm). Tropical-storm-force winds extend outward up to 60 miles and the center of Harvey will remain inland or move very near the coast of southeastern Texas through Monday. Some weakening is expected over the next 48-hours and the storm is forecast to be downgraded to a tropical depression by Sunday evening.

Harvey is expected to produce additional rain accumulations of 15 to 25 inches over the middle and upper Texas coast through Thursday. Isolated storm totals may reach around 40 inches in this area. During the same time period, Harvey is expected to produce total rain accumulations of 5 to 15 inches farther south toward the lower Texas coast, farther west toward the Texas Hill Country, and farther east through southwest and central Louisiana. Storm surge of 1 to 4 feet is still possible throughout the tropical storm warning area.

A tropical storm warnings currently extend from Port O'Connor to Sargent, Texas and flood warnings, and flash flood warnings are in effect throughout the region.



ELECTRICITY SECTOR

OVERVIEW

Impacted utilities, including Entergy, AEP Texas, and CenterPoint Energy have issued statements and are expecting power outages to last several days. Restoration efforts cannot begin until weather conditions are safe for workers. Sustained wind conditions must be below 34 miles per hour before bucket trucks can be deployed. High rainfall total and flooding could extend restoration times in many affected areas. Before equipment in flooded areas can be reenergized, waters will need to recede and equipment at substations will need to dry out and be inspected for damage. There are no unmet needs by any electric utility at this time. The Southeastern Electric Exchange and the Midwest Mutual Assistance Group are actively monitoring the need for mutual assistance and crew deployments to respond to power outages in Texas and Louisiana.

ELECTRICITY OUTAGES AS OF 7:30 AM EDT 08/27/2017			
Impacted State	Current Confirmed Customer Outages	Percent of Confirmed State Customers without Power	24-hr Peak Customer Outages
Louisiana	426	<1%	3,673
Texas	289,509	2.5%	287,760
Total	289,935		*

**There is no sum of the Peak Customer Outage column because peaks for individual utilities occur at different times; a total would not reflect peak outages*

- Louisiana
 - As of 7:30 AM EDT, August 27, the State of Louisiana has 426 customer outages. This represents <1% of customers in the state.
 - Beaugard Electric Coop (BEC) has 185 customer outages.
 - Southwestern Electric Power Co (SWEPCO) has 173 customer outages.
 - Entergy Louisiana is monitoring the storm and will respond as needed.
 - SWEPCO is sending 187 personnel to assist in AEP Texas restoration efforts.
 - Cleco Cooperative crews, along with contractor crews, are currently on stand-by and prepared to restore service, if necessary. Cleco is monitoring the storm.
 - The Governor of Louisiana has declared a state of emergency.
 - The Louisiana Governor’s Office of Homeland Security and Emergency Preparedness (GOHSEP) has deployed two Emergency Management Assistance Compact (EMAC) Advance Team personnel to Texas in response to the storm. Texas made the request for personnel through the EMAC.



- Texas
 - As of 7:30 AM EDT, August 27, the State of Texas has 289,509 customer outages. This represents 2.5% of customers in the state.
 - AEP Texas has 181,832 customer outages. This is a 16% decrease from last report.
 - CenterPoint Energy has 58,852 customer outages. This is a 150% increase from last report.
 - Austin Energy has 12,968 customer outages.
 - Texas New Mexico Power has 11,502 customer outages.
 - On Saturday afternoon, AEP Texas crews began assessing the extent of damage inflicted on the company's electric system by Hurricane Harvey. Crews also began restoration activities in the Corpus Christi area. Estimated Event Restoration Times (ETR) are to be released Sunday.
 - AEP Texas, via a news release, indicated that approximately 2,000 personnel have either arrived or shortly will arrive at locations to safely wait out the storm and then begin the restoration process. These personnel include distribution and transmission line crews, forestry teams, and support staff. AEP Texas's sister company, SWEPCO, is sending 187 personnel to assist in restoration efforts.
 - CenterPoint Energy restoration efforts have been slowed but not halted due to flood conditions.
 - Texas-New Mexico Power has started restoration efforts that have been slowed by flooding. TMNP has not changed their overall estimate of 100% restoration by Monday at 7:00 PM EDT.
 - Guadalupe Valley Electric Cooperative suspended overnight restoration efforts. They will resume once daylight returns Sunday morning.
 - Nueces Electric Cooperative (NEC), which serves Corpus Christi and surrounding areas, announced via their website that they cannot begin damage assessment or restoration until after the storm has passed. NEC expects prolonged outages that could last for several days for some customers.
 - On Saturday night, the Governor of Texas added 20 counties to the state disaster declaration, bringing the total to 50 counties.



OIL AND GAS SECTOR

OFFSHORE PRODUCTION

- As of 12:30 PM EDT, August 26, 428,568 b/d (24.49%) of the oil production and 835 MMcf/d (25.93%) of the natural gas production in the federally administered areas of the U.S. Gulf of Mexico are shut-in, according to estimates by the Bureau of Safety and Environmental Enforcement (BSEE).

U.S. Gulf of Mexico Oil & Gas Production Status <i>as of 12:30 PM EDT 08/26/2017</i>			
Production	Pre-Event	Shut-In (08/25)	Shut-In (08/26)
Crude Oil (b/d)	1,750,000	377,177	428,568
Natural Gas (MMcf/d)	3,220	748	835
Infrastructure	Pre-Event Count	Evacuated (08/25)	Evacuated (08/26)
Manned Platforms	737	86	112
Rigs	31	5	6

Source: BSEE

PETROLEUM REFINERIES

- As of 08:00 AM EDT, August 27, all six refineries in the Corpus Christi area have been or were in the process of shutting down, according to public reports. These refineries have a combined refining capacity of 924,720 b/d, equal to 18.4% of total Gulf Coast refining capacity. In addition, four refineries in the Houston/Galveston region area were operating at reduced rates.



PORTS

- The U.S. Coast Guard has set the following conditions for ports and waterways in the U.S. Gulf Coast region as a result of Harvey.
- In addition, Louisiana Offshore Oil Port (LOOP) facilities are currently reporting normal operations. LOOP is executing its Inclement Weather Plan and will update Shippers accordingly.

Status of Texas and Louisiana Gulf Coast Ports <i>as of 8:00 AM EDT 08/27/2017</i>		
Port	Status	Date Stamp
Sector Corpus Christi		
Brownsville	Open.	08/26/2017
Corpus Christi	Port Condition Zulu. Closed.	08/25/2017
Sector Houston and Galveston		
Freeport	Port Condition Zulu. Closed.	08/25/2017
Galveston	Port Condition Zulu. Closed.	08/25/2017
Houston	Port Condition Zulu. Closed.	08/25/2017
Texas City	Port Condition Zulu. Closed.	08/25/2017
Sector Port Arthur and Lake Charles		
Beaumont	Port Condition X-Ray. Open with restrictions.	08/25/2017
Lake Charles	Port Condition X-Ray. Open with restrictions.	08/25/2017
Orange	Port Condition X-Ray. Open with restrictions.	08/25/2017
Port Arthur	Port Condition X-Ray. Open with restrictions.	08/25/2017
Sabine Pass	Port Condition X-Ray. Open with restrictions.	08/25/2017

Source: U.S. Coast Guard

WAIVERS

- The U.S. Environmental Protection Agency (EPA) has approved a request made by the Texas Commission on Environmental Quality (TCEQ) to waive requirements for reformulated gasoline (RFG), Reid vapor pressure (RVP), and Texas Low Emission Diesel (TxLED) that apply in some counties covered by the Governor’s Disaster Proclamation. The waiver was issued after consultation with the U.S. Department of Energy to address a fuel supply emergency caused by refinery shutdowns and evacuations associated with Hurricane Harvey.



State Fuel Specification Waivers as of 8:00 AM EDT 08/27/2017				
State	Waived Requirement	Effective Dates		Status
		Start	End	
Texas	RFG requirement waived in Houston-Galveston-Brazoria areas. Allows the sale or distribution of conventional gasoline.	08/26/17	09/15/17	Active
Texas	7.8 psi RVP standard waived for gasoline sold in 20 counties where low-RVP gasoline is required and are also under the Governor’s Disaster Declaration.	08/26/17	09/15/17	Active
Texas	TxLED requirement waived in 29 counties that require TxLED and are also under the Governor’s Disaster Declaration.	08/26/17	09/15/17	Active

Source: U.S. Environmental Protection Agency

- In response to Harvey, the Federal Motor Carrier Safety Administration (FMCSA) declared that an emergency exists that warrants issuance of a Regional Emergency Declaration in the States of Texas and Louisiana and an exemption from certain Federal Motor Carrier Safety Regulations (FMCSRs), including hours-of-service (HOS) regulations, to addresses possible emergency conditions creating a need for immediate transportation of supplies, equipment and persons into and from those States.
- Texas and Louisiana have declared state emergencies due to Harvey. These declarations automatically waive select FMCSRs, including hours-of-service (HOS) regulations, for motor carriers hauling resources to aid in restoration efforts. The declarations exempt FCMSR in every state along the motor carrier’s route as long as the final destination is with the declared disaster areas in Texas or Louisiana.

State Emergency Declarations and HOS Waivers as of 8:00 AM EDT 08/27/2017				
State	Details	Effective Dates		Status
		Start	End	
Regional (Texas & Louisiana)	Regional Emergency Declaration and FMCSR waiver issued by FMCSA.	8/25/17	10/26/17	Active
Texas	State of Disaster declared for Aransas, Austin, Bee, Calhoun, Chambers, Colorado, Brazoria, DeWitt, Fayette, Fort Bend, Galveston, Goliad, Gonzales, Harris, Jackson, Jefferson, Jim Wells, Karnes, Kleberg, Lavaca, Liberty, Live Oak, Matagorda, Nueces, Refugio, San Patricio, Victoria, Waller, Wharton, and Wilson counties.	8/23/17	TBD	Active
Louisiana	State of Emergency declared.	8/23/17	TBD	Active

Sources: [U.S. Department of Transportation](#); Governor Office Websites; NOLA.com; Houston Chronicle

